AMENDMENTS TO THE CLAIMS:

1.   (Currently amended) A computer implemented method for an auction comprising:

establishing an auction system which is accessible via a network, performs an auction for a set of items including an item and another item which is different than said item, and comprises a processor which generates a user interface for entering a bid ; entering in said auction; system a bid for an item,

receiving a said bid for said item and a condition on winning said item which are being entered by a bidder by using said user interface; to identify an item, a bid value for said item, and a constraint for a set of items including said item

displaying on said user interface a bid table for indicating that said bid is one of a selected bid and an unselected bid during a course of said auction; and

formulating a winner determination problem including said condition on winning said item constraint as an integer program, and solving said integer program to determine whether said bid is a selected bid; [[,]]

receiving an edit to said condition which is entered by said bidder by using said user interface, and updating said bid table to indicate that said bid is one of a selected bid and an unselected bid based on said edited condition; and

upon terminating said auction, updating said bid table user interface to indicate that said bid is one of a winning bid and a non-winning bid based on whether said bid is determined to be a selected bid;.

2.   (Previously Presented) A method according to claim 1, wherein the auction system is selected from a group consisting of an open cry auction, an ascending bid auction, and a descending bid auction.

3.   (Currently amended) A method according to claim 1, wherein the <u>condition on winning</u> ~~constraint~~ comprises a plurality of <u>conditions</u> ~~constraints~~ which characterize combinations of bids from the bidder for ~~the~~ desired items within the auction system.

4.   (Currently amended) A method according to claim 1, further comprising:

enabling the auction system <u>such</u> ~~so~~ that it is responsive to <u>said</u> ~~a~~ budget <u>condition</u> ~~constraint~~.

5.   (Currently amended) A method according to claim 4, wherein the budget <u>condition</u> ~~constraint~~ is specified by the bidder.

6.   (Currently amended) A method according to claim 1, <u>wherein said condition on winning said item is</u> ~~further comprising: enabling the auction system so that it is responsive to constraints~~ selected from the group consisting of a maximum quantity <u>condition</u> ~~constraint~~, a minimum quantity <u>condition</u> ~~constraint~~, a precedence <u>condition</u> ~~constraint~~, and a general linear <u>condition</u> ~~constraint~~.

7.   (Currently amended) A method according to claim 1, further comprising:

enabling the auction system so that it is responsive to seller <u>conditions</u> ~~constraints~~.

8.   (Currently amended) A method according to claim 7, wherein the seller <u>conditions</u> ~~constraints~~ specify a minimum value for a combination of items.

9.   (Currently amended) A method according to claim 7, wherein the seller <u>conditions</u> ~~constraints~~ specify a minimum value for a combination of a minimum number of items to be sold.

10.   (Currently amended) A method according to claim 7, wherein the seller <u>conditions</u> ~~constraints~~ specify a minimum value for a combination of items correlated to a precedence relationship.

11.   (Currently amended) A method according to claim 1, wherein said <u>condition</u> ~~constraint~~ comprises a linear <u>condition</u> ~~constraint~~.

12.   (Currently amended) A method according to claim 11, wherein said network comprises the Internet, said user interface being displayed on a web page on the Internet.

13.   (Currently amended) A program medium executable in a computer system for facilitating an auction, the program medium comprising machine-readable instructions to cause the computer system to execute ~~steps for~~:

<u>establishing an auction system which is accessible via a network, performs an auction for a set of items including an item and other items which are different than said item, and comprises a processor which generates a user interface for entering a bid in said auction;</u>

<u>receiving a bid for said item and a condition on winning said item which are entered by a bidder by using said user interface;</u>

<u>displaying on said user interface a bid table for indicating that said bid is one of a selected bid and an unselected bid during a course of said auction;</u>

<u>formulating a winner determination problem including said condition on winning said item as an integer program, and solving said integer program to determine whether said bid is a selected bid;</u>

<u>receiving an edit to said condition which is entered by said bidder by using said user interface, and updating said bid table to indicate that said bid is one of a selected bid and an unselected bid based on said edited condition; and</u>

<u>upon terminating said auction, updating said bid table to indicate that said bid is one of a winning bid and a non-winning bid</u>

~~establishing an auction system which is accessible via a network and comprises a processor which generates a user interface for entering a bid;~~

~~entering in said auction system a bid for an item, said bid being entered by a bidder by using said user interface to identify an item, a bid value for said item and a constraint for a set of items including said item; and~~

~~formulating a winner determination problem including said constraint as an integer program, solving said integer program to determine whether said bid is a selected bid, and updating said user interface based on whether said bid is determined to be a selected bid.~~

14.   (Currently amended) A computer implemented method for facilitating an auction comprising:

establishing an auction system which is accessible via a network<u>, performs an auction for a set of items including a first item and a second item which is different than said first item,</u> and comprises a processor which generates a user interface for entering a bid;

receiving <u>a proposal comprising a bid on said first and second items and a condition on winning said first and second items which are entered by a bidder by using said user interface</u> ~~constraints specified by a participant in the auction, wherein the conditions constraints characterize combinations of items desired by the participant within said auction system~~;

<u>displaying on said user interface a bid table for indicating that said proposal is one of a selected proposal and an unselected proposal during a course of said auction</u> ~~generating a proposal based on the constraints specified by the participant using a column generation formulation, said proposal comprising a set of bids from the participant that satisfies all of the constraints specified by the participant; and~~

formulating a winner determination problem ~~based~~ including said <u>condition on winning said first and second items</u> ~~constraints~~ as an integer program, and solving said integer program to determine whether said ~~proposal is a selected proposal~~, and updating a user interface based on whether said proposal is determined to be a selected proposal<u>;</u>

<u>receiving an edit to said condition which is entered by said bidder by using said user</u>

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interface, and updating said bid table to indicate that said proposal is one of a selected proposal and an unselected proposal based on said edited condition; and

upon terminating said auction, updating said bid table to indicate that said proposal is one of a winning proposal and a non-winning proposal.

15.   (Currently amended) A method according to claim $\underline{1}$ [[14]], wherein said integer program is expressed by the following, subject to coditions specified by bidders in said auction:

$$\text{Max} \quad \sum_{i,\,p} v_{i,p}\, x_{i,p}$$

where $v_{i,\,p}$ denotes a monetary value of a bid that bidder p has placed for item i, and, $x_{i,\,p}$ denotes a decision variable having a value of 0 when said bid is not in a winning combination, and 1 when said bid is a winning combination.

16.   (Currently amended) A method according to claim 14, further comprising:

specifying combinatorial bids by interpreting the condition on winning ~~constraints~~.

17-18. (Canceled)

19.   (Currently amended) A method according to claim 14, wherein the condition on winning is ~~constraints are~~ represented by a linear relationship ~~relationships~~ between indicator variables on bids from the participant.

20.   (Currently amended) A method of conducting an auction in an auction system in which plural items are offered for auction by a seller, and plural bidders place bids on said plural items, said method comprising:

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establishing an auction system which is accessible via the Internet, <u>performs an auction for a set of items including an item and another item which is different than said item,</u> and comprises a processor which generates a web page including a user interface for entering a bid <u>;</u> ~~entering~~ in said auction ~~system an offer of a item for bid, said offer including a seller constraint that describes said item~~;

<u>receiving</u> ~~entering in said auction system~~ a bid for said item <u>and a condition on winning said item which are</u> ~~, said bid being~~ entered by a bidder by using said user interface ~~to identify said item, a bid value for said item and a constraint for a set of items including said item~~;

<u>displaying on said user interface a bid table for indicating that said bid is one of a selected bid and an unselected bid during a course of said auction;</u> and

after said bidder has input said bid including <u>said condition on winning</u> ~~a bidder constraint~~, formulating a winner determination problem including said <u>condition on winning</u> ~~bidder~~ ~~constraint~~ and <u>a</u> seller <u>condition</u> ~~constraint~~ as an integer program, and solving said integer program to determine whether said bid is a selected bid

<u>receiving an edit to said condition which is entered by said bidder by using said user interface, and updating said bid table to indicate that said bid is one of a selected bid and an unselected bid based on said edited condition; and</u>

<u>upon terminating said auction, updating said bid table to indicate that said bid is one of a winning bid and a non-winning bid,</u>

wherein said integer program is expressed by the following:

$$\text{Max} \quad \sum_{i,p} v_{i,p}\, x_{i,p}$$

where $v_{i,p}$ denotes a monetary value of a bid that bidder p has placed for item i, and, $x_{i,p}$ denotes a decision variable having a value of 0 when said bid is not in a winning combination, and 1 when said bid is a winning combination,

wherein said user interface displays a space for a bidder to identify plural bidder

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conditions ~~constraints~~ comprising a budget condition ~~constraint~~ that specifies a total amount that a bidder is willing to pay for an item, a precedence condition ~~constraint~~ that indicates that bidder will win an item of plural items only if said bidder also wins another item of said plural items, an alternate precedence condition ~~constraint~~ which indicates that a bidder will win an item only if said bidder wins all of the items in a precedence set, a quantity condition ~~constraint~~ which specifies one of a maximum quantity and a minimum quantity of items that said bidder will win, and a general linear condition ~~constraint~~ which indicates a coefficient for said plural items and an upper bound and lower bound on a sum of coefficients for said plural items, and

wherein said seller condition ~~constraint~~ comprises one of a condition ~~constraint~~ indicating a minimum total amount that seller will accept for plural items, a condition ~~constraint~~ indicating a minimum quantity of items in said plural items to be sold, and a precedence condition ~~constraint~~ indicating that an item will be sold only if another item is sold.

21.   (Canceled)